of direct irritation of the nerves was always corroborated by their division, after which irritation of the cord by asphyxia failed to induce perspiration in the parts supplied by them. The fibres in question leave the cord about the level of the third to sixth dorsal roots, enter the sympathetic, and pass through it into the ganglion stellatum, thence they pass into brachial plexus and follow the course of the median and ulnar nerves. The trunk of the former supplies the inner half of the paw, while the latter innervates the external half.

The following are the titles of some recent papers in periodical medical literature in regard to the Anatomy and Physiology of the Nervous System : STEFANI, On the Physiology of the Cerebellum, *Archivio Italieno*, July ; PUTNAM-JACOBI, Sphymographic Experiments on a Human Brain, exposed by an opening in the Cranium, *Am. Jour. Med. Sci.*, July ; BEVAN LEWIS, On the Comparative Structure of the Cortex Cerebri, *Brain*, April ; CROCHLEY CLAPHAM, On Skull Mapping, *Ibid ;* MARC SEÉ, The Communication of the Ventricular Cavities of the Brain with the Sub-Arachnoid Spaces, *Revue Mensuelle*, June ; EULENBERG and GUTTMANN, Physiology and Pathology of the Sympathetic System of Nerves, translated by A. Napier, M. D., *Jour. of Ment. Sci.*, July ; JEWELL, On Dr. Brown-Séquard and his Recent Lectures, *Med. Jour. and Exam.*, June and July ; R. M. SMITH, Note on the Effects of Pressure on the Irritability of Nerve Trunks, *Phil. Med. Times*, July 6 ; WIGHT, Some Measurements of Skulls and Heads, showing that Development, Growth and Education increase the volume of the anterior parts of the Cerebrum, indicated by the Masto-Frontal Angle, *Proc. Med. Soc. Co. of Kings*, May.

b.—PATHOLOGY OF THE NERVOUS SYSTEM AND MIND, AND PATHOLOGICAL ANATOMY.

AN EARLY SYMPTOM OF TABES DORSALIS.—Westphal, *Berliner klin. Wochenschr.*, 1878, No. 1 (abstr. in *St. Petersb. med. Wochenschr.*). The lack of the "knee or lower thigh symptom" discovered by the author in 1871, is according to his latest careful observations characteristic of tabes, and a very valuable symptom in the earliest stage of the disorder. He has almost invariably observed that the failure of this phenomenon before the development of ataxia and the decrease of sensibility, and in many such cases where, from its failure in conjunction with vague pains indistinguishable from neuralgia, he had diagnosed locomotor ataxia, the diagnosis was confirmed by the ophthalmoscopic examination—advanced white atrophy of the optic nerve, and variations of the pupil. A combination of occasional pains in the lower extremities, together with failure of the knee sinew reflex, appears to indicate incipient locomotor ataxy, but the occurrence of such pains with the continuance of the knee reflex is not so certain an indication that these pains are not tabetic. The author lays especial stress upon this symptom in certain cases of hypochondria, in which, as in tabes, there are troublesome pains, vesical weakness, impotence, etc., and which are there distinguished with difficulty from incipient tabes. If the knee phenomenon does not appear in such cases then we may infer that the trouble is locomotor ataxy.

Apart from its physiological, pathological, prognostic and diagnostic importance, this symptom may be of significance as regards the treatment, since it enables us to recognize in its earliest stages a disease, which in its later development is almost incurable, and therefore may help us to combat it more successfully.

HYPERÆSTHESIA OF THE JOINTS.—Koch, *Berl. klin. Wochenschr.*, Apr. 27 (rep. of meeting of German Surgical Society in Berlin, 7th Congr.).

The author showed that, with the occurrence of hyperæsthesia of the skin the results of hemisection of the cord are not exhausted; that there is besides a pronounced increase of sensibility in the fasciæ, the periosteum and especially of the joints. He further remarked, previous to showing how this accounts for a part of the articular neuroses, that the section must be at the level of the third lumbar vertebra if the hyperæsthesia involves the lower extremities; when the body and upper extremities are involved the section must be as high as the sixth cervical vertebra; and finally, that the same phenomena as are produced by hemisection of the cord are also caused if only the cerebellar lateral tracts of Flechsig (situated on the inner side of the lateral columns of the cord) are injured. Moreover, we are able to recognize at least the skin and joint hyperæsthesia separately if only definite points are implicated within the cerebellar lateral tracts.

The most various methods of research on the great nerve stems do not enable us to produce anything like this hyperæsthesia. The fibres whose course through the cord renders possible the disturbance of sensibility, do not cross until at the level of the medulla, and leave the cord at the sixth cervical vertebra to go to the upper extremities; and those for the lower limbs begin to leave about the level of the first lumbar vertebra.

Considering the absolutely similar arrangement of the lateral cerebellar tracts in man and the higher mammals, it is worth while to examine whether there does not occur in man articular neuralgic affections, like those experimentally produced in animals, affections that are principally characterized by the appearance in an apparently sound joint, of sudden intense neuralgic pain when it is moved, the pain goes away when the cause of irritation disappears. The author mentioned in the further characterization of this affection, the probability that it is, as a rule at least, multiple and unilateral, and mentioned the reasons which speak against the involvement of symmetrical joints, and recalled the fact that simultaneous anomalies of sensibility of the skin and periosteum may be considered. He then cited cases from the literature which confirm the clinical bearings of the experimental disease, and suggested that possibly a large part of what are considered as neuralgias of the joints might be thus explained, but for the difficulty of distinguishing in an animal a condition of the sensibility of the joint in rest and the presence of painful points in the same. In this regard we must look for help to the clinical analysis of cases in man in which the cord or medulla has been wounded unilaterally. In all cases we can now already distinguish articular hyperæsthesia from neuralgia of the joints in a special sense of the word. The author sketched the differential diagnosis of these two affections, and showed how on the basis of experiment, a whole series of well known brain and cord regions, the interruption of continuity of which, whether traumatic or inflammatory in its cause, or only temporary, must be accompanied with the above sketched phenomena. Experimental evidence is still wanting as to whether purely inflammatory alterations or partial section of peripheral nerves are to be considered as etiological factors of articular hyperæsthesia.

As regards therapeutics it may be said, that by a strong electrical irritation of the skin it is possible to immediately relieve the condition of hyperæsthesia of the joints. Still it returns again after the application, and it is uncertain whether repetition of the treatment really quickens the cure. Koch observed some results from the introduction of a watery saponin solution into the joint; narcotics were absolutely worthless.

Experimental details serving to elucidate the condition closed the paper.

Esmarch, after the reading of the paper, testified as to the value of Koch's experiments, and thought that the central disorder which accompanied neuralgia in man must, in consideration of the usually resulting cure, be of a not very serious, and perhaps only vaso-motor. This helps to understand the temporary œdema sometimes noticed in the articulations.

OPHTHALMOPLEGIA INTERNA.—At the meeting of the Royal Medical and Chirurgical Society, April 9 (rep. in *Brit. Med. Jour.*), Dr. Jonathan Hutchinson read a paper on a group of symptoms (ophthalmoplegia interna) indicative of disease of the lenticular ganglion. After briefly alluding to the anatomy of the lenticular ganglion, the author stated that its distribution by disease might be expected to be followed by paralysis of three distinct muscular structures, the dilator of the pupil, the constrictor of the pupil, and the ciliary muscle. Under such circumstances, the pupil would become motionless, and the patient losing the power of accommodation, would be unable to read with spectacles. For this condition, involving paralysis of all the muscular structures within the eyeball, the term ophthalmoplegia interna was proposed, in contradistinction for cases in which all or most of the muscles moving the eyeball were involved. The author expressed his belief that examples of both these conditions were met with occasionally in practice, and that the features of each were peculiar and of great interest to neuropathologists. His conjecture was that when ophthalmoplegia interna existed alone, that is, unattended by paralysis or defect of any of the external muscles of the eyeball, that the disease was in all probability in the lenticular ganglion itself. In venturing upon this diagnosis, as great importance was to be attached to the absence of some symptoms as to the presence of others. If disease existed implicating the nucleus or any part of the trunk of the third nerve, and thus paralyzing the constrictor of the pupil, there must necessarily be defect of some of the external muscles of the eyeball. The paper next proceeded to narrate the details of eight cases in which the condition referred to was present. None had afforded an opportunity for dissection; and the diagnosis for the present must, therefore, be held to be conjectural only. It was observed, however, that the cases bore a very close resemblance to each other. In none of them was the patient seriously ill, and in but two were there definite indications of implication of other parts of the nervous system. In none did the disease of the nervous system, whilst the patient was under observation, extend; a fact which might, it was suggested, be in part accounted for by the fact that specifics were used in all. Of the eight cases, in five both eyes were affected. It appeared highly probable that syphilis was in most the remote cause. In three out of the eight, there was no history of syphilis, but in none of these were the facts conclusive as to the negative. All the patients were of an age at which syphilitic affections of the nervous system are common. The oldest was forty-four; the youngest was twenty-seven. In one case, the author had himself attended the patient for severe syphilis four years before the eye symptoms began. Attention was especially asked to the fact that in many cases the paralysis of the iris preceded that of the ciliary muscle, and almost always in excess of it; and further that, under treatment, the ciliary muscle might regain its power whilst the iridoplegia persisted. In no single case was the failure of the accommodation the first symptom. A suggestion was made as to the possible association of this group of symptoms with the early stage of locomotor ataxy, especially with that form of it which appears to be connected with syphilis.

DIFFERENTIAL DIAGNOSIS OF DISSEMINATED CEREBRO-SPINAL AFFECTIONS.—Charcot. *Gaz. des Hopitaux*, No. 15, Feb. 5.

To facilitate the diagnosis of the four principal groups of multilocular cerebro-spinal affections, I have thought it well to put in tabular form the various symptoms of each, indicating the relative frequency of the cardinal symptoms and their value. In the following table the italics designate those symptoms to which I attach the most importance.

The other symptoms are as indicated, but less frequent. For example, spasmodic paraplegia and muscular atrophy in multilocular sclerosis, vesical paresis in general paralysis, the embarrassment of speech in locomotor ataxia, etc.

We should be guided principally by the characteristic symptoms, so to speak. Thus, if we observe in a patient ataxia with nystagmus, we must look for disseminated sclerosis, and not for locomotor ataxia, since nystagmus is a valuable symptom of multilocular sclerosis. Also spasmodic paraplegia (recognized by the continuous movements of trepidation produced by a tap on the sole of the foot) is much more characteristic of syphilitic disorder than of multilocular sclerosis, especially if it is accompanied with fixed pain, which always indicates a phenomenon of compression, e. g., the paraplegia consecutive to Pott's disease.

It is unnecessary to add, that this table is intended to show clearly only what we think to be the present state of our knowledge, but that it may be modified in some details by future discoveries. Nevertheless, in its principal points it appears to me only to contain actual facts acquired by medical experience.

DISSEMINATED CEREBRO-SPINAL AFFECTIONS.

	TABETIC SERIES.	MULTILOCULAR SERIES.	DISSEMINATED SYPHILITIC DISEASE.	GENERAL PARALYSIS.
Cerebral Symptoms.	Epileptiform Apoplectic Attacks.	*Epileptiform Apoplectic Attacks.*	Epileptiform Attacks.	*Epileptiform Apoplectic Attacks.*
	Vertigos.	*Vertigos.*	*Vertigos.*	*Vertigos.*
	Intellectual Disorders.	*Intellectual Disorders.*	Intellectual Disorders. Aphasia.	*Intellectual Disorders.*
	Diplopia Strabismus.	*Diplopia. Nystagmus.*	*Amblyopia. Optic Neuritis.*	Diplopia. Amblyopia.
	Amaurosis.	Amblyopia. White Atrophy.	*Diplopia.*	*Inequality of the Pupils.*
	Inequality of Pupils			
	Facial Anæsthesia.		*Headache. Fixed Pain.*	Headache.
	Deafness.			
	Aural Vertigo.			
	Laryngismus.			
	Embarrassment of Speech.	*Embarrassment of Speech.*		*Embarrassment of Speech.*
		Troubles of Deglutition.		
		Paralysis of Pneumogastrics.	Total Facial Paralysis.	
Visceral Symptoms.	*Gastric Crises.*	*Gastric Crises.*	Crises. Non-nervous.	
	Nephritic Crises.			
	Vesical Crises. Paresis of the Bladder.			Paresis of Bladder.
	Cystitis.			
Spinal Symptoms.	Sensation of Cord around Body.	Fulgurant Pains.	*Pseudo-neural Pains.*	*Fulgurant Pains.*
	Hyperæsthesia.			
	Anæsthesia.	Patches.	*Spinal Hemianæsthesia.*	*Formications.*
	Inco-ordinated Movements.	Inco-ordination.		*Inco-ordination.*
	Contractures and Tremors.	*Special Tremor.*	*Spasmodic Paraplegia in the form of Hemiparaplegia.*	*Paresis Tremor.*
		Spasmodic Paraplegia.		*Special Tremor of the Hand.*
Trophic Symptoms.	Bedsores.	Bedsores.		Bedsores.
	Arthropathies.	Arthropathies.		
	Fractures.			
	Muscular Atrophy.	Muscular Atrophy.		Muscular Atrophy.

Muscular Spasm of the Facial Muscles.—At the session of the Soc. de Biologie, Mar. 16 (rep. in the *Gaz. des Hopitaux*), M. Krishaber reported a case of a man in whom there existed a condition of muscular spasm of the facial muscles, rendering it extremely difficult for him to masticate his food or to talk. Whenever he opened his mouth, certain muscles of his face and neck were spasmodically affected, and continued so until it was closed again; this spasm was bilateral, but a certain predominance of the muscles of the right side was observed. The zygomatici, the orbicularis, the eyelids, the nasal muscles, in short, all those of the upper part of the face were unaffected, while those below were very much distorted. The line of demarcation was the mouth itself. The muscles of the tongue, of the floor of the mouth, and the velum palati were uninvolved. The patient could not feed himself, and was condemned to absolute silence. M. Krishaber had not been able to follow up the patient, and could not give the further particulars as to the outcome of this strange affection.

Trophic Disorders Following Experimental Lesions of the Sciatic.—M. Brown-Séquard, at a recent meeting of the Soc. de Biologie, April 27 (rep. in *Le Progrès Médical*), stated that he had observed, in a number of Guinea pigs, the sciatic nerves of which had been divided, a number of hitherto undescribed phenomena, such as extreme agitation, cries, rotation, transient cataleptic rigidity. In all of them, moreover, the characteristics of very pronounced spinal epilepsy, persistent after the first symptoms, which may be attributed to a spinal meningitis, have more or less rapidly disappeared. In one of these Guinea pigs, the paw of the side opposite the divided nerve is now the seat of a notable atrophy, that of the injured nerve being intact. This fact counts against the classic theory of trophic disorders. Moreover, M. Brown-Séquard maintained that the so-called trophic disorders are often due to the animal's biting the paw in its convulsive movements.

General Paralysis.—We condense the following from the *Gaz. des Hopitaux*, May 4th.

General paralysis of the insane is not a paralysis, but an ataxia. M. Bouillaud remarked this in 1846, and his statement has been repeated since then by Marcé and Jaccoud. Dr. J. Christian, physician-in-chief of the asylum of Maréville, seeks to demonstrate this anew in a memoir before us. The elements of true paralysis do not exist in what is commonly known as general paralysis; no matter how long it exists, we never observe (except in fortuitous complications) an absolute veritable paralysis. As the disease progresses and the intelligence fails, the patient becomes less and less able to move, but, even to the last, there are movements, feeble, to be sure, irregular and inco-ordinated, but still possible and voluntary. Such is the position maintained by M. Christian, and in which he is supported by all alienists.

The physician of Maréville proceeded to experimentally establish this fact in the following manner: he made use of dynamometrical tests on twenty-two paralytics; nine being between thirty and forty years of age, nine between forty and fifty, and four only over fifty years of age. In all the disease was of long standing.

The important point was to ascertain what is the difference in muscular power in the same patient at different stages of the disease. In order to have a point of comparison, M. Christian conceived the idea of weighing his paralytics every time the dynamometer test was made, the variations of weight to mark the progress of the disease. He noticed that, in general, as the bodily weight augmented the force of pressure also increased, but occasionally the reverse occurred, so that it was not possible to establish the exact relation between the variation of the weight and that of the muscular power.

Taking 50 as a mean of muscular force, out of the twenty-two patients, five exceeded this figure, the highest being a man 41 years old, who gave 85 at the first examination, and at subsequent ones oscillated between 80 and 60; mean 70. Six patients were below 20, the minimum being 10, observed once only at the end of the disease, in a man 37 years of age, who at the beginning gave 25, and as an average, 16 to 18. The means of the other patients were, in one 17, one 19, in two 26, one each of 32, 35, 36, 37, 38, three each of 38 and 40, two 45, and one each of 46, 47, 48, 52, 54 and 55.

With all these variations it will be seen in no case was there absolute paralysis, and in four cases the average was above the normal. Even at the very last there was still ability to voluntarily contract the muscles.

ACUTE PNEUMONIA AS A NEUROSIS.—M. Ch. Fernet, *La France Médicale*, Nos. 23 and 24, advances the theory that acute pneumonia is a herpes of the lung due to neuritis of the pneumogastric nerve. In this idea that pneumonia is a herpes, he follows MM. Parrot and Lagout, who, in their respective memoirs on herpetic fever (*Gaz. Hebdom.*, 1871), and on herpes labialis (*Memoires de la Soc. Méd. des Hopitaux*, 1873), have advanced the same opinion. They supported it on the analogy of facts of internal herpes of the mucous membranes, such as the herpetic sore throat recognized by Trousseau, Gubler, Lasègue and others, the resemblance in certain essential points of the symptoms of these affections and those of acute pneumonia, the coincidence of labial herpes in both these diseases, etc. That the skin remains generally unaffected, is a fact they explain by the greater resisting power of the cutaneous surface to the morbid manifestation, and that the herpetic process exhausts itself on the internal organs.

The nature of pneumonia as a neurosis (herpes being considered as such) being thus assumed, the intermediary nerves must be sought. Our author thinks, and here he follows the analogies suggested by others, that zona of the face is a neuritis of the trigeminus, that herpetic angina is neuritis of the same nerve, or rather, perhaps, of the glosso-pharyngeal, that pneumonia is due to a neuritis of the pneumogastric. In support of this view, he cites three cases of post-mortem of cases of acute unilateral pneumonia, in which there were evidences of decided irritative lesions of the vagus on the affected side, reddening, enlargement and congestion. In one case in which there was a clinical history of diaphragmatic pleurisy, the phrenic nerve of the same side (right) was affected. The results of microscopic examinations were merely negative. These facts seem to give some plausibility to his views, which, nevertheless, we think will hardly yet meet with universal acceptance.

CHANGES OF THE SYMPATHETIC IN DIABETES—The following are the results of the examinations of the sympathetic in five autopsies of diabetic patients, made by Dr. Stanislaus John Poniklo, of Cracow, and published in the London *Lancet* (Am. Rep.), May, 1878. We quote his own words:

1. "In all the cases I found an increased amount of connective tissue in the ganglia, especially in the upper and lower cervical ganglia. This change consisted partly in an hypertrophy of the connective stroma, normally occurring in the sympathetic ganglia, and partly in the accumulation of newly-formed connective tissue between the nervous elements, a change that was beautifully seen in transverse sections of the ganglia. In some sections the amount of connective tissue was so great it was only with considerable difficulty that rudiments of nervous tissue could be detected. The capsules of the nerve cells appeared to be thickened, having numerous granules adhering to them. In some parts numerous cells, partly round, partly fusiform or elongated, were deposited between the fibres of connective tissue, this cellular infiltration being most marked around the blood-vessels.

2. "In one case I found abnormal dilatation of blood-vessels in the solar ganglion, the vessels being tortuous and distended with corpuscles. In some of the microscopical preparations the dilated vessels covered nearly one-half the field. There were also irregular accumulations of red corpuscles, the result of small hæmorrhages.

3. "The most interesting change was that presented by the nervous elements themselves. The nerve cells, the capsules of which were thickened as above described, appeared to be of smaller size than normal, their protoplasm was more homogeneous, especially in those parts of the ganglia where the cellular infiltration predominated. In one case, that of a young subject, there was an increased amount of dark-yellow or brown granular pigment in the nerve cells. Turning now to the nerve fibres, it may be mentioned that in the normal ganglia of the sympathetic, in addition to bundles of grey non-medullated fibres, there occur a fairly large number of *white medullated* fibres, arranged partly in separate bundles enclosed within a distinct sheath of areolar tissue, and partly intermixed in the bundles of the non-medullated fibres. I did not find any bundles of medullated fibres in the sections of ganglia from these cases of diabetes, but here and there isolated and extremely atrophied white fibres could be distinguished in the midst of the grey, which were preserved in the preparations. These last-named fasciculi were even much atrophied, the bundles being small, and the individual fibres wasted, and in parts almost concealed by cellular infiltration. The changes in the connective stroma of the ganglia above described sufficiently account for the atrophy of the nerve fibres and cells, an effect very frequently observed in other parts of the nervous system—e. g., the brain and spinal cord—where there is hypertrophy of the connective tissue. It must, however, be reserved for future investigation to ascertain whether this atrophy of the nerve fibres does not extend higher up in a centripetal direction.

"The above-mentioned changes were met with, to a more or less extent, in each of the five cases examined, and they presented an excellent illustration of extremely advanced degeneration of the cervical sympathetic ganglia.

"The results of this examination of the sympathetic nerve in diabetes, although based on a small number of cases, are in perfect accordance with physiological experimentation, for Cyon and Aladoff have shown that excision of the cervical ganglia is immediately followed by diabetes. So extensive a degeneration of the ganglia as that above described may be considered as equivalent to their excision."

The researches of M. Franck, given elsewhere in the Periscope of this issue, are of interest in this connection.

NEURITIS.—Ottomar Rosenbach, *Arch. f. exp. Path.*, VIII., 223 (*St. Petersburger med. Wochenschr.*), has repeated in Cohnheim's laboratory, Tiesler and Feinberg's experiments of producing artificial inflammation of a nerve, and watching for its extension. He employed the sciatic and vagi nerves of rabbits, operating in part with caustics, and in part by transfixing the nerve, but found nothing but local alterations to follow the lesion; as regards the question of *neuritis migrans* also the results were entirely negative, no disseminated inflamed patches being found elsewhere in the course of the nerve, or in the cord.

PSYCHIC EPILEPSY.—J. Weiss, *Psychiatrische Studien aus der Klinik von Prof. Leidesdorf*, Wien, 1877. *Centralbl, f. d. med. Wissensch.*, No. 15. Psychic epilepsy is a special form of disorder, running a typical course, convulsive attacks being replaced by psychoses, which stand in no relation to convulsions, and have nothing to do with them. The mental disorder is characterized by a sudden onset without incubation; it speedily or within a few hours reaches its acme, then quickly disappears, and is followed by complete psychic restoration, and by its periodic recurrence in the same form, without any production of a secondary psychosis or notable mental weakness. Four cases are given. One denied ever having had any convulsive attacks. He suffered from frequent attacks of insanity, lasting three or four days, was in this condition highly demented, felt a short aura, and was, after this period, perfectly normal again, but with no recollection of what had happened during the attack. The second of the patients had suffered for thirty years from vertigo, pain and confusion of mind. At present are observed spells of running franticly around, behaving violently, crying "fire," etc. Duration, one to two days. In the third the patient was regularly, two or three days before menstruation, at first melancholic, then fully demented, and again, after two or three days, the patient is well. The fourth, a boy, had sometimes several times a day, and sometimes not oftener than once in eight to fourteen days, an attack of pain of short duration, and during the time there appears to him a figure that it seems to him he must kill—consciousness returns again in one or two minutes. In this case, three months later, after a first short attack of stupor, there occurred actual epileptic attacks, with tonic and clonic convulsions. The author explains this as a metamorphosis of the earlier psychosis to epilepsy with convulsive attacks.

A further paper on this subject, with detailed accounts of two cases, by the same author, is published in the *Allg. Zeitschr. f. Psychiatrie,* XXX., I.

THE DIAGNOSIS OF EPILEPSY AND HYSTERO-EPILEPSY.—In a lecture at the Salpêtriére, M. Charcot thus gives the differential diagnosis between true epilepsy, the greater epilepsy, as he calls it, and hystero-epilepsy.

The following three phases are known of the former :

1. An aura of short duration, not giving the patient time to prepare for the attack.

2. A second phase comprising the initial cry, the period of tonic contractions, that of clonic movements, then stertor.

3. A third phase, lacking in many, we may say the majority of cases, which consists in what we have called the post epileptic delirium, a period of violent impulse or maniacal agitation.

Hystero-epilepsy has an entirely different symptomatology.

1. The aura is often extremely prolonged : it lasts one, two, or several days. The patient has abundant time to prepare for the attack. The sensation mounts slowly from the abdomen toward the head, making stoppages by the way. It may be compared to a knotted cord.

2. Arrived at the *epileptoid* stage. There is first a prolonged, modulated cry, we may say in one case like the whistle of a locomotive. Then comes on a period with ataxic contractions, extension of the limbs, turning of the head, then one of clonic movements and finally a light degree of stertor.

The above may be compared with epilepsy. What follows appertains to hysteria proper, and we observe, moreover, as it were, a pause between the two acts of the drama.

3. The patient is then seized with bizarre contortions, which correspond with nothing, and produce no delirium. The body rises in the bed, falls and rises again, curves in the arc of a circle, of which the head and feet form the two extremities. All these gymnastics are as incoherent, disordered, and fantastic as possible.

4. This gradually disappears to give place to the phase of *emotional attitudes.* Here the gestures, positions, violent as they may be, are governed by some sentiment and idea, the sentiment and the idea delirious. The attitude expresses, in turn, the most various thoughts, the look and the speech indicate within a few moments fear, anger, shame, tenderness, pleasure ; many patients are plunged into a sort of ecstasy, the eyes are directed toward heaven, the hands clasped, the visage illuminated. Some express by the *pose,* the special form of delirium, long before they express it in words. A young German woman, long in the hospital, remained two hours immobile and silent, the arms extended as if crucified. When she rose she intoned a choral of Luther, or some other religious poetry.

It may be questioned in this connection whether, in cases of this kind, it is rather the delirious idea that suggests the attitude, or the attitude that suggests the idea.

5. Finally, there appears a phase corresponding very nearly to the post-epileptic delirium of epilepsy, though it is not altogether comparable in the

two cases. In the hysterical patient illusions and hallucinations predominate. She sees animals—cats, dogs, rats, and vipers. Each patient has her own favorite hallucinations. The illusions are in regard to persons about her. She ordinarily takes the physician or *interne* for some one of her acquaintances, and, according to the case, treats him with courtesy or abuse, employs contumely or words of affection.

Such are the five phases of the hystero-epileptic attack, which cannot be reasonably confounded with the true disease. Some of these phases may be lacking, but we may rest assured that their order will not be other than here described. (*Tribune Médical.*) *Gazette des Hopitaux.*

THE ASSOCIATION OF OBSCURE ABSCESS OF THE LIVER WITH HYPOCHONDRIA.—Dr. W. A. Hammond, *St. Louis Clin. Record*, June, calls attention to the possibility of abscess existing in the liver, unrevealed by special hepatic symptoms, and giving rise to very considerable gastric derangement, and cerebral and emotional disturbances, which latter may amount to serious hypochondria, verging on insanity. The cerebral symptoms, in the five cases narrated, were headache, insomnia, vertigo, and great mental depression. He was led to examine the liver, and in most of the cases detected fluctuation. The abscesses were emptied by the aspirator introduced through the intercostal spaces, and the results were, in all five cases, satisfactory as to the removal of the cerebral symptoms, after the evacuation of a variable quantity of pus. In one other case, instead of an abscess, a hydatid cyst was discovered by the needle. Dr. Hammond deduces from these facts the following conclusions:

1. That hepatic abscesses are probably much more common with us than is generally supposed.

2. That they may exist without any local symptoms, or such general disturbance of the system as is commonly regarded as indicating their presence.

3. That they may be associated with hypochondria and other evidences of cerebral disturbance.

4. That they should be opened at the earliest possible moment, and without waiting for adhesions to form between the liver and the abdominal wall.

5. That the proper place for performing the operation of aspiration is in one of the intercostal spaces. This point is strongly insisted upon by Dr. Davis, in his memoir.

6. That the operation by aspiration is free from danger. Dr. Davis never saw any ill consequences from it, and Dr. Jimenez, of Mexico, states (*Clinica Medica*, Appendice a las lecciones sobre los Abscessos, del Higado, Mexico, 1866, p. 4), that of the hundreds of times he has punctured the liver through the intercostal spaces for abscess, he has never once seen the operation followed by peritonitis. In a very admirable paper, Dr. Tauszky, of New York (*Med. Record*, April 20, 1878), expresses the same opinion.

7. That in all cases of hypochondria or melancholia, the liver should be carefully explored, and that even if no fluctuation be detected, or any other

sign of abscess be discovered, aspiration, being a harmless operation, should be performed.

8. That if pus be evacuated, the operation may be expected to be followed by a cure of the mental disorder, as well as by the preservation of the life of the patient from the probably fatal consequences of hepatic abscess.

9. That if no abscess be found, the patient will at least be no worse off than he was before.

The paper alluded to above, of Dr. J. C. Davis, appeared simultaneously with Dr. Hammond's publication in the *N. Y. Med. Journal* for June of the present year.

PATHOLOGY OF NERVES.—Dr. G. Tizzoni publishes, in a short note in the *Centralblatt*, No. 13, 1878, the following conclusions from his histological researches. In order to render the contents of the sheath of the nerve plainly visible, he removed the myeline by dissolving it with chloroform.

1. In normal nerves and also in fibres recently divided or irritated, a fine *horny* reticulum is found supporting the medullary investment. The same has been demonstrated by Kuehne with another method.

2. After division of a nerve, degeneration of the axis cylinder and myeline occurs, both in the central and the peripheral portion ; faster, however, in the latter, and extending to the last intramuscular terminations.

3. This degeneration commences always at the annular constrictions of Ranvier, and proceeds thence towards the nucleus in the centre of the interannular portion.

4. The changes in the myeline consist at first in the formation of large oval drops, separated from each other and corresponding to the segments of the medullary sheath described by Schmidt and Lantermann. Subsequently these drops divide still further, and give rise to a varicose appearance of the nerve fibre.

5. The main factor in the destruction of the medullary sheath is the penetration of leucocytes into the interior of the fibre. The protoplasm of these cells absorbs the myeline globules, and either destroys or transforms them. To all appearance, a part of the leucocytes leave again the fibre, carrying with them their spoils, while another portion of those cells undergoes annihilation in the nerve fibre.

6. This immigration of cells occurs not only at the cut surface of the nerve, but probably also by diapedesis, and through openings in the neurilemma, since it can be observed after ligature of the nerve or injection of irritants, without opening the neurilemma.

7. The immigration is followed also by destruction of the horny reticulum.

8. The degeneration of the axis cylinder consists in multiple segmentation, which is always preceded by a thinning of the axis cylinder at the subsequent line of division. More rarely granular degeneration and formation of vacuoles is observable in the axis cylinder.

9. Some of the fragments of the axis cylinder can be absorbed and destroyed by the immigrated cells.

10. After destruction of the axis cylinder and myeline, the fibre appears shrunken on account of the hypertrophy of the endoneurium, the longitudinal fibres of which border on the neurilemma. Within the neurilemma, numerous oval nuclei are arranged in rows.

11. After section and other modes of irritation of nerves, the nuclei of the nerve multiply, and the protoplasm surrounding them is augmented. Tizzoni also saw the nuclei divide into two, three or more pieces by transverse lines of segmentation,

Further details are reserved for a larger publication on the pathology of the nervous system. G.

The following are a few of the most recently published papers on the Pathology of the Nervous System and Mind :

Gray, Spasmodic Spinal Paralysis, *Proc. Med. Soc. Co. of Kings*, July; Filehne, Mellituria from Irritation of the Depressor Nerves in Rabbits, *Centralbl. f. d. Med. Wissensch.*, No. 18 ; Baumgarten, Hemiopia after Disease of the Occipital Cortex, *Ibid*, No. 21 ; Eisenlohr, On the Pathological Anatomy of Sclerosis of the Posterior Columns, *Centralbl. f. Nervenheilk.*, No. 6 ; Weber, The Nature of Hydrophobia, *Phil. Med. Times*, June 8 ; Morelli, Pathological Cases Bearing on the Question of the Existence of Cortical Motor Centres, *Lo Sperimentale*, June ; Doutrebente, The Different Kinds of Remissions Occurring in the Course of Progressive General Paralysis, *Ann. Med. Psychol.*, May ; Jacobs, Mania Epileptica, *Deutsche Med. Wochenschr.*, June 1 ; Seguin, Lectures on the Localization of Spinal and Cerebral Diseases, *N. Y. Med. Record* (cont. art.) ; Robertson, Observations on Some Points in Cerebral Pathology and Percussion of the Skull, *Jour. Ment. Sci.*, July ; Gowers, On Some Symptoms of Organic Brain Disease, *Brain*, April ; Duret, On the Role of the Dura Mater and its Nerves in Cerebral Traumatism, *Ibid* ; Mitchell, On a Rare Vaso-Motor Neurosis of the Extremities, and on the Maladies with which it may be Confounded, *Am. Jour. of Med. Sci.*, July.

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c.—THERAPEUTICS OF THE NERVOUS SYSTEM AND MIND.

Morphia.—Dr. H. Gibbons, Sr., *Pacific Med. and Surg. Journal*, June, lays down the following rules in regard to the hypodermic administration of morphia :

1. Avoid it in congestion and inflammatory conditions of the brain.
2. Avoid it in pulmonary congestion, and where dyspnœa is not the result of spasm.
3. Avoid it in acute inflammatory affections of the heart and pericardium.
4. Avoid it in high febrile excitement.
5. Avoid puncturing a vein. The effect of introducing morphia in a vein is instantaneous. It is possible that the evil results were due in some